



BEST MANAGEMENT PRACTICES

A Water Quality Field Guide for Nurseries



DARREN L. HAVER

Southern California Edition | Includes Guidelines for Southern California Edison Properties

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A Water Quality Field Guide for Nurseries

**University of California
Agriculture & Natural Resources
Cooperative Extension, Orange County**

Best Management Practices - A Water Quality Field Guide for Nurseries was originally developed as a joint project between the University of California Cooperative Extension Orange County, Orange County Coastkeeper, Orange County Farm Bureau, and Southern California Edison. Our goal was to create a simple water quality field guide for small to medium-sized nurseries operating in urban environments. This field guide provides nursery growers, as well as land owners, operators, employees, and stormwater municipal personnel, with a straightforward list of Best Management Practices (BMPs) to reduce pollutants entering urban storm drains, creeks, bays, and the ocean.

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Photographs included herein are for the express purpose of demonstrating proper BMPs. Photographs depicting improper practices were staged and no implication should be made that a nursery is not in compliance with regulations.

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**Special Notice to
Nurseries with Southern
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License Agreements**

Implementation of any of the BMPs listed in this handbook requires prior written approval by SCE. BMPs listed in this handbook are provided as guidelines for nursery operators. Follow SCE's guidelines for BMP approval described on pages 30 and 31 of this handbook.

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Introduction

Water Quality Regulations

Federal, state, and local government, in response to concerned citizens, have mandated that nurseries eliminate or reduce wastewater discharges from their operations, especially if they exceed established water quality criteria. The authority of agencies to regulate discharges is contained in federal and state water quality laws, and local codes.

Clean Water Act of 1972 - The Clean Water Act (CWA) of 1972, administered federally by the United States Environmental Protection Agency (USEPA), developed two programs to address water quality: the National Pollutant Discharge Elimination System (NPDES) and the Total Maximum Daily Load (TMDL).

NPDES Program - The federal NPDES program requires point source dischargers to mitigate their effluent to meet specific water quality standards based upon the best available control technologies. A point source is defined as any 'discernable, confined, and discrete conveyance' and generally includes water treatment facilities, industrial factories, and urban storm conveyance systems. Agriculture has historically been exempt from the NPDES permit program.

In California, the federal NPDES program is implemented by the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCB). The SWRCB and each of the nine RWQCBs within the state are given the task of enforcing the Clean Water Act as well as state water quality laws and regulations.

California's Porter-Cologne Act, enacted prior to the 1972 Clean Water Act, requires each RWQCB to establish basin plans containing policies, beneficial uses, water quality objectives, and implementation plans. Under the Porter-Cologne Act, RWQCBs can issue Waste Discharge Requirement (WDR) permits to individuals discharging into state waters to ensure that water quality objectives are not violated. If it is determined that a nursery's discharges are resulting in the impairment of a water body, the Regional Water Quality Control Board may issue a cease and desist order and require a WDR permit for further discharges to occur. The WDR sets water quality requirements that must be met by all discharges that occur during the period of time that the permit is issued to an individual. Several RWQCBs have issued WDRs to nurseries in areas of the state adjacent to sensitive waterbodies or when concerned local citizen or environmental groups expressed concern over the discharge of surface runoff from a facility.

On a regional basis, the RWQCB also issues WDRs through the Irrigated Lands Regulatory Program (ILRP), which replaced the ag waiver program in 2003. The ILRP regulates discharge from irrigated agricultural lands with either WDRs or conditional waivers of WDRs (Orders). Requirements of these conditional waivers include water quality monitoring and taking corrective actions if impairments are found. This necessitates implementation of Best Management Practices (BMPs) and may also require individuals establish individual or group monitoring programs. Nurseries located in highly urbanized areas may also be regulated under the Municipal Storm Water Permitting Program or MS4 permit.

TMDL Program – Total Maximum Daily Loads are defined as the quantitative amount of a pollutant a water body can tolerate on a daily basis, while meeting established water quality standards. Each state is required

by Section 303(d) of the CWA to identify “impaired” waterbodies and establish maximum loading limits, a TMDL, for each pollutant causing the impairment. The process requires that all point and nonpoint sources be identified and assigned a pollutant allocation that shall not be exceeded in order to protect the beneficial uses of the designated water body. Beneficial uses include wildlife habitat, recreation, drinking water source, agriculture, and shellfish harvesting. The 303(d) list of impaired waterbodies contains information on which beneficial uses are impaired and by what pollutants. The list is updated every two years and is available for viewing on the SWRCB or RWQCB websites. (Refer to section on Water Quality Related References.)

Groundwater – California’s Pesticide Contamination Prevention Act (PCPA) of 1985 required the California Department of Food and Agriculture to establish numerical values for specific characteristics of pesticides in order to provide information on those pesticides that potentially could contaminate groundwater. Numerical values are established for the following characteristics: water solubility, soil adsorption coefficient (K_{oc}), hydrolysis half-life, soil metabolism under anaerobic and aerobic conditions, and field dissipation of pesticides. Knowledge of these pesticide properties prior to the use of a pesticide enables the user to minimize or eliminate the risk of the pesticide impacting surface and ground waters. The University of California Riverside has developed an interactive pesticide manager web site to assist the user in determining if the pesticide being utilized, taking into account site specific conditions, has the potential to enter surface or ground waters. (<http://www.pw.ucr.edu>)

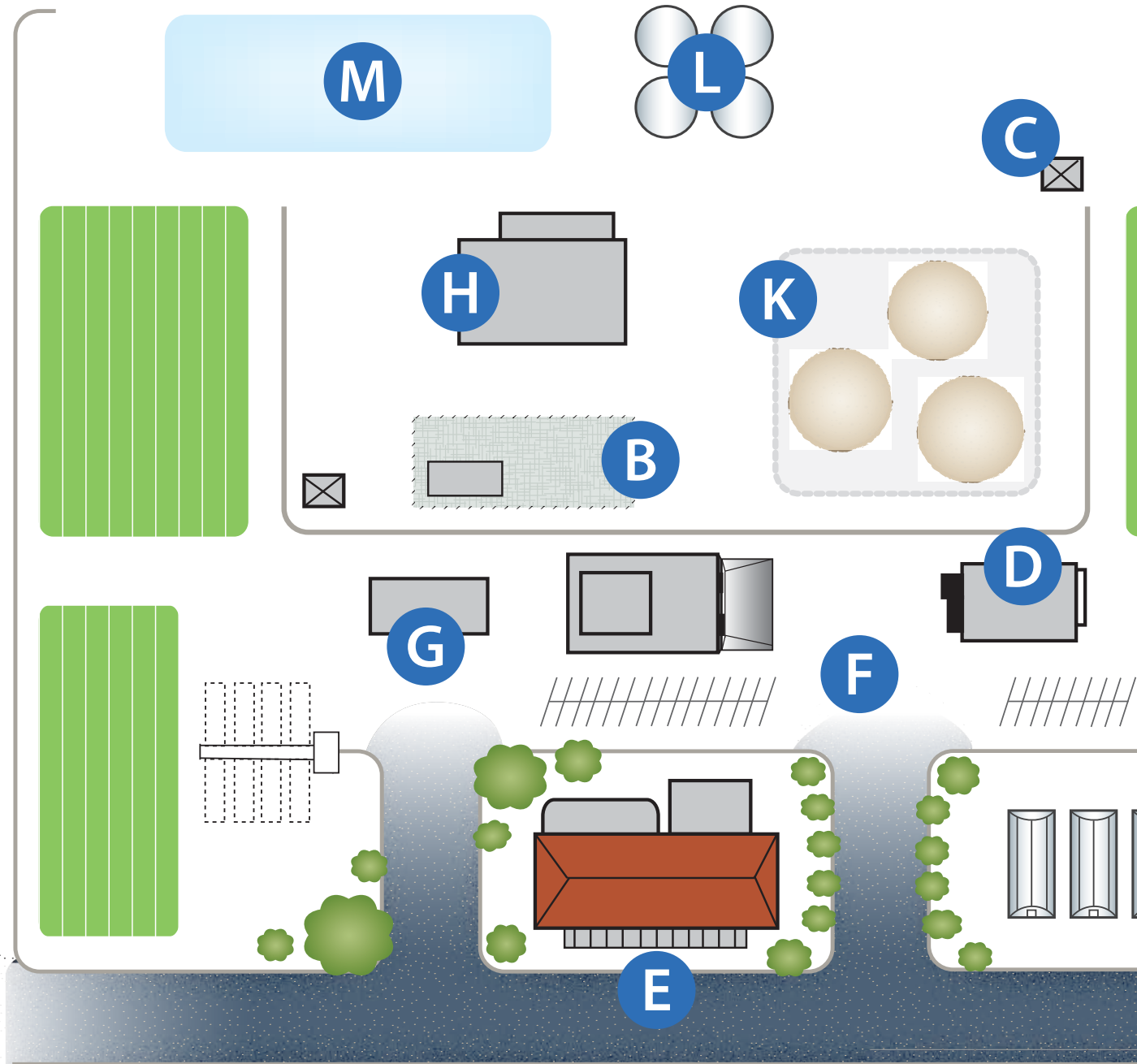
Impacts on Nursery Industry

It is imperative that growers are fully aware of the impact, if any, of their operation on the beneficial uses of local waterbodies. The following steps should be taken by existing and planned nursery operations:

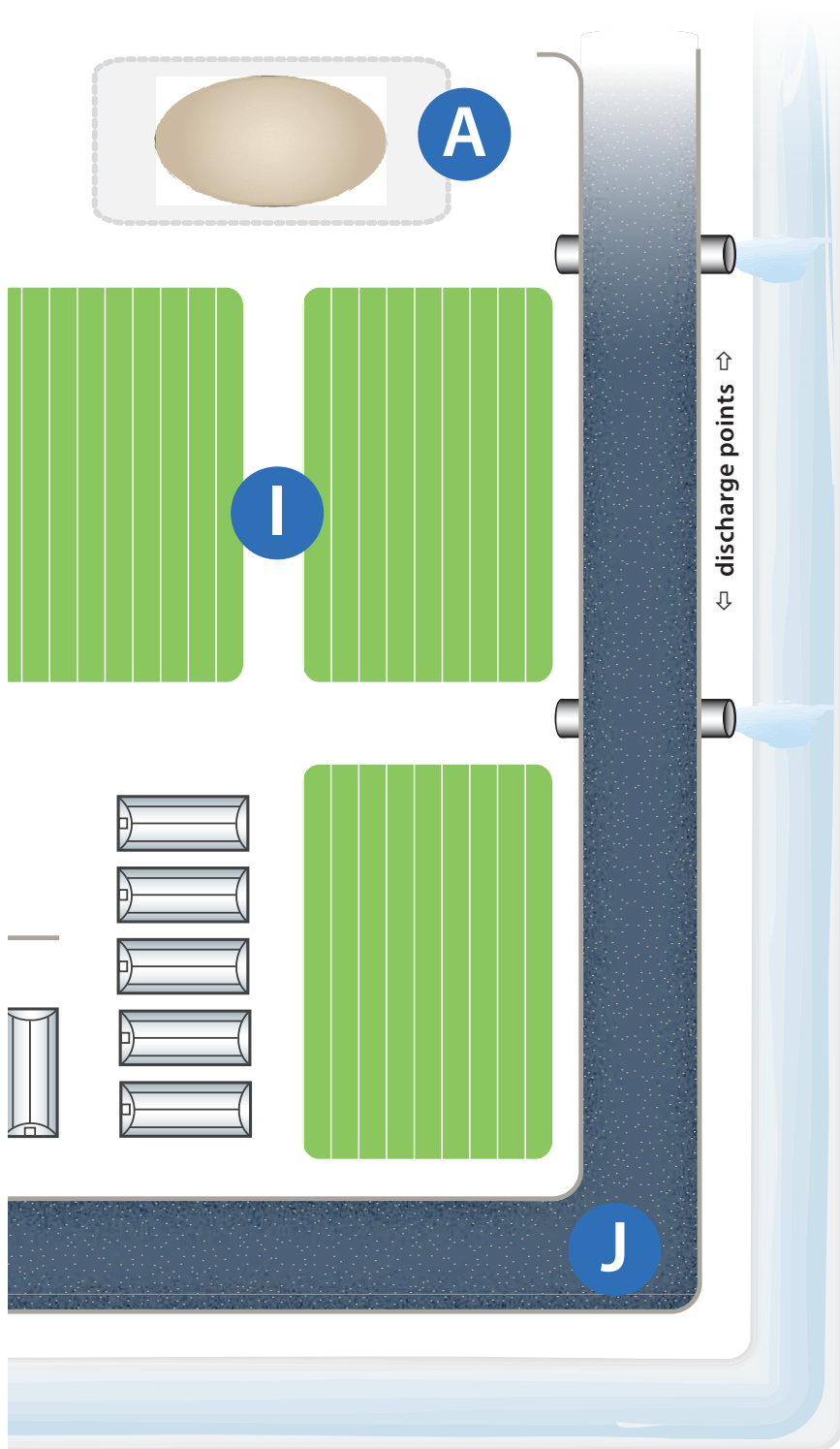
- Determine which RWQCB governs where your operation exists.
- Inventory streams, lakes, estuaries, or other water bodies that may be impacted by discharges from your operation.
- Obtain a copy of the appropriate RWQCB Basin Plan to determine the local water quality objectives.
- Be an active stakeholder in the development of TMDLs for water bodies that your facility impacts.
- Be aware that if you discharge, a WDR may be requested by RWQCB.
- Be prepared to work closely with the RWQCB, local water agencies, and other regulatory agencies on developing appropriate controls for discharges from your facility.
- Determine the need for permits prior to installing structural BMPs, such as retention basins, sediment traps, etc.
- Monitor flow and basic nutrient concentrations in discharges regardless if you operating under a WDR. Protect yourself against inaccurate data.
- Know the basic properties of the pesticides utilized at your operation and how they could potentially impact local waters.
- Join the Irrigated Lands group in your watershed.

In order for the nursery industry to act in accordance with the numerous water quality regulations, it is imperative that more efficient fertilization, irrigation and pest management programs are developed and implemented by growers.

Sample Nursery Layout



↩ Urban Storm Drain Carrying Runoff to Ocean



- A** Composting Area
- B** Fertilizer Storage
- C** Restroom & Trash Facilities
- D** Maintenance Areas
- E** Non-Production Landscape Areas
- F** Parking Lots & Loading Docks
- G** Pesticide Storage
- H** Potting Area
- I** Production Areas
- J** Roads
- K** Soil Storage & Mixing Areas
- L** Water Collection & Storage
- M** Water Treatment

A

Composting Area

POTENTIAL POLLUTANTS: Nutrients • Pathogens • Pesticides • Sediment • Trash

YES



1



2

- Isolate the composting area from water conveyance systems, lakes, and overland storm flow.
- Provide adequate buffering around composting piles utilizing vegetation, berms, or wattles.
- During storm events, properly secure compost piles with a material that allows water to pass through but holds the mulch and soil in place (e.g. shade cloth).

- 1 A mulch pile is covered with shade cloth to protect from storm events.
- 2 Place wattles around the perimeter of mulch piles or soil storage areas to minimize movement of materials during storm events.



Composting is **not allowed** on SCE land. Dispose of used soil and decaying plant material in appropriate trash containers.

NO

This compost pile is located near the perimeter of the nursery and lacks any form of protection from storm events.



Fertilizer Storage

B

POTENTIAL POLLUTANTS: Nutrients • Trash

YES

- Store bags or non-waterproof containers on pallet(s) covered with plastic tarps or inside a storage area to protect from rain.
- Fertilizer tanks should have a secondary containment system made with an impermeable concrete, metal, or synthetic material.
- Place empty containers or bags in a trash can with a lid.
- Open bags should be sealed and stored in a location where accidental spillage can be prevented.
- Mix and load fertilizers on an impermeable surface, such as concrete or tarp, to permit complete, easy clean up of spills.
- Clean up any spillage immediately and repair any torn bags.

- 1 A properly covered fertilizer storage area.
- 2 Dispose of empty containers and bags in trash receptacles with lids.



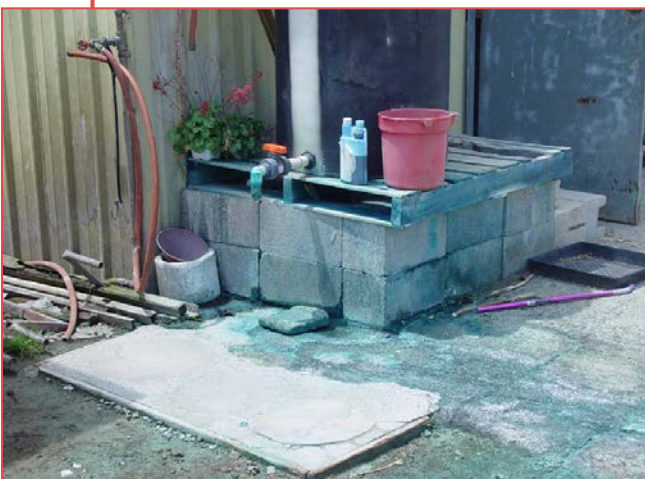
1



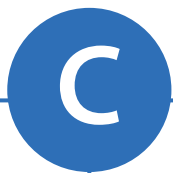
2

NO

This mixing area is not properly outfitted to allow easy clean up. Materials and spills have not been immediately attended to.



Fertilizer storage tanks are **not allowed** on SCE property.



Restroom & Trash Facilities

POTENTIAL POLLUTANTS: Nutrients • Pathogens • Trash

YES



1

- Portable restrooms should be maintained on a regular schedule to avoid leaks or spills from contaminating surrounding areas.
- Trash should be placed in containers at all times. Utilize lids at all times to prevent trash from being carried into storm drains by wind and storm events.

1 A well-maintained portable restroom located in the container growing area.

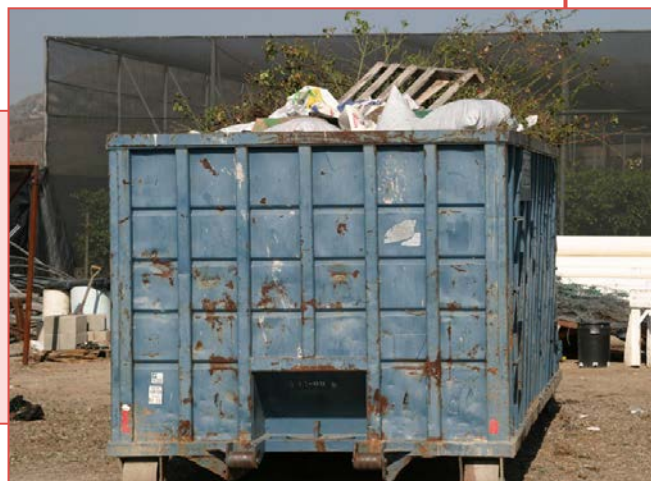


2

2 Trash containers should be properly secured and covered with a lid, as this receptacle near a container growing area has been.

NO

Garbage containers left uncovered are potential sources of pollutants that can be carried into storm drains by wind and storm events.



Maintenance Areas

D

POTENTIAL POLLUTANTS: Nutrients • Pathogens • Pesticides • Sediment • Trash
Automobile/Equipment Fluids

YES

- Provide secondary containment for fuel areas.
- Place the fueling area on a relatively flat impervious surface (2-4%).
- Use a berm around fueling area to prevent run-off, especially from storms.
- Store and dispose of all hazardous waste and oil as required by law.
- Mitigate runoff by covering exposed soil with gravel and surrounding maintenance areas with landscape or vegetative buffers.
- Equipment and equipment parts should be stored under a tarp or a covered storage area to keep stormwater from washing chemicals, such as oil, off-site into nearby storm drains.

- 1 Exposed soil near maintenance and equipment storage areas should be covered with gravel to minimize runoff.
- 2 Chemicals or waste containers should be properly stored in secondary containment areas.



1



2

NO

Improper storage of unused equipment and parts permits oil and other chemicals to be washed into drains during storm events.



*Flammable and hazardous materials, such as fuel, **may not be stored** on SCE property.*

E

Non-Production Landscape Areas

POTENTIAL POLLUTANTS: Nutrients • Pathogens • Pesticides • Sediment • Trash
Automobile/Equipment Fluids

YES

- Utilize these landscape areas as buffers throughout the nursery to collect stormwater or irrigation water.
 - Minimize the use of pesticides and nutrients in these areas except when necessary to maintain plant health.
 - Protect hillsides from erosion using plastic, wattles, or vegetation for stabilization.
 - Reduce off-site sediment movement utilizing sandbags, straw, or coir fiber rolls around perimeter fences and near entrances.
- 1 A non-production area planted with vegetation to stabilize the hillside.
 - 2 Nursery perimeters can be protected from erosion using wattles.



1



2

NO

Significant erosion has occurred in this non-production area where vegetation, fabrics, or gravel have not been utilized.



Parking Lots & Loading Docks

F

POTENTIAL POLLUTANTS: Automobile/Equipment Fluids • Sediment • Trash

YES

- Cover parking lots with a layer of gravel to allow infiltration.
- Utilize decomposed granite with a binder or gravel to provide a stable parking surface while still allowing infiltration.
- Use wattles, gravel sumps, or vegetative filters to filter pollutants around perimeter of impervious surfaces (e.g. concrete, asphalt)
- Use plastic grids (or approved substitute) to stabilize gravel in critical areas such as driveway entrances.
- Utilize shaker or corrugated steel plate in driveway entrances to keep gravel and soil from tracking on to streets.

- 1 Loading dock protected with a thick layer of 3/4" or larger gravel.
- 2 Plastic grids help stabilize gravel applied to a driveway entrance.



NO

Driveway entrance slopes to street and lacks adequate erosion stabilization such as additional gravel, a corrugated steel plate, or plastic grids.

G

Pesticide Storage

POTENTIAL POLLUTANTS: Pesticides • Trash

YES



1



2

- Follow all state laws regarding pesticide storage.
 - Store empty pesticide containers in a trash can with a lid until transported to approved disposal site (contact local Agriculture Commissioner's Office for a list of sites).
 - Storage, handling, and disposal of pesticides (including mixing, loading, and cleaning practices) should not occur in the vicinity of a well, waterbody, or storm drain.
 - Install a secondary system to contain any spills or leaks.
 - Clean up any spills immediately with a proper spill kit. Dispose of material as required by law.
 - Store pesticide application equipment in an enclosed or covered location.
- 1 A properly designed and maintained pesticide storage area.
 - 2 Proper storage of pesticide application equipment reduces the chance of pesticide residues being washed off during storm events.

NO

Improper storage and disposal of empty pesticide containers.



Potting Area

H

POTENTIAL POLLUTANTS: Nutrients • Pathogens • Pesticides • Sediment • Trash

YES

- Potting areas should be covered to minimize movement of loose soil from canning equipment.
- Spilled potting soil should be cleaned up regularly to prevent its movement in rain and irrigation water, especially if fertilizers and pesticides are incorporated.
- Utilize a graveled area for watering new transplants where runoff can be contained and allowed to infiltrate.

- 1 A permanent structure covering a potting area reduces the exposure of loose soil to storm events.
- 2 Temporary structure erected over a potting area also help to protect loose soil from rain and irrigation water.



NO

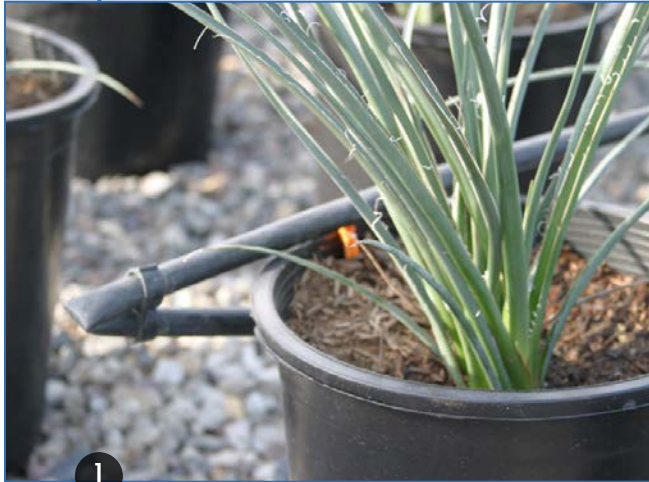
Potting areas that lack any type of soil stabilization will experience significant erosion during storm events.

I

Production Areas

POTENTIAL POLLUTANTS: Nutrients • Pathogens • Pesticides • Sediment • Trash

YES



1



2

- Perform regular tests for distribution uniformity on irrigation delivery systems and make corrections if necessary.
 - Consolidate containers and turn off irrigation in areas not in production (requires individual on/off valves at each sprinkler head).
 - Minimize or eliminate the use of fertilizer injection if overhead sprinklers are utilized to irrigate. Shift to using controlled-release and slow-release fertilizers.
 - Place plants on gravel, geotextile, or weed cloth to allow infiltration and minimize erosion, including inside greenhouse structures.
 - If recycling water, minimize contact between runoff and bare surfaces by lining runoff trenches with concrete.
 - Slope production areas 2-4% to prevent ponding and to allow runoff to flow into vegetative buggers or gravel sumps for filtering.
- 1 Drip irrigation in a 5-gallon container.
 - 2 Weed cloth covers this outdoor production area to minimize weed growth and erosion.



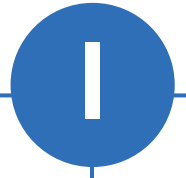
SCE **does not allow** grade changes.

NO

Poor irrigation practices lead to excessive runoff that carries pesticides, nutrients, and sediment.



Production Areas (cont'd)



POTENTIAL POLLUTANTS: Nutrients • Pathogens • Pesticides • Sediment • Trash

YES

- Implement an integrated pest management (IPM) program, which includes monitoring for pests, establishing tolerance thresholds, and developing treatment protocols that utilize least toxic strategies first.
 - Do not apply pesticides in, near, or above any bodies of water, including dry (ephemeral) streams/creeks, storm drains, and drainage ditches.
 - Apply pesticides directly to the target to minimize drift and overspray, especially in areas irrigated with overhead sprinklers.
 - Clean up spills of soil, especially those containing incorporated pesticides.
 - Apply the minimal amount of irrigation to maintain optimum plant growth and health.
- 1 Drip tape irrigation.
 - 2 Covering a production area in gravel prevents erosion and sediment movement.



1



2

NO

Irrigation and storm events mobilize soil and associated chemicals spilled in production areas.



J

Roads

POTENTIAL POLLUTANTS: Nutrients • Pathogens • Pesticides • Sediment • Trash
Automobile/Equipment Fluids

YES



- Maintain a layer of gravel on roads near critical locations such as drainage areas, creeks, paved roads, and parking lots.
- Apply polyacrylamides (PAM) prior to storm events to reduce erosion and sediment movement.
- Utilize decomposed granite with a binder to stabilize roads in critical locations.
- Minimize or eliminate runoff from roads, especially if gravel is not used.
- If erosion is significant, install a trap in the road to collect sediment.
- When decomposed granite or gravel is not utilized, direct runoff into vegetated areas to catch sediment.



- 1 Road and access areas covered with gravel.
- 2 Sediment trap installed in road to catch eroded sediment.

NO

Unprotected road surfaces are vulnerable to erosion and sediment movement.



Soil Storage & Mixing Areas

K

POTENTIAL POLLUTANTS: Nutrients • Pathogens • Pesticides • Sediment • Trash

YES

- Locate soil storage and mixing as far away from water conveyance systems and any bodies of water, including dry (ephemeral) streams/creeks, storm drains, and drainage ditches, as possible.
 - Prior to inclement weather, protect soil from wind by storing it under covered structures or a material that allows water to pass through but holds the soil in place (e.g. shade cloth).
 - Utilize soil incorporated with fertilizers and pesticides immediately; do not store for extended periods.
 - Surround soil storage areas with straw/rice/coir wattles or some type of berm.
- 1 Soil piles covered with shade cloth are better protected from wind and rain.
 - 2 Sandbags can be used to construct berms around soil piles.



1



2

NO

The soil piles pictured lack any protection from storm events; they should be covered or surrounded by berms.



L

Water Collection & Storage

POTENTIAL POLLUTANTS: Nutrients • Pathogens • Pesticides • Sediment • Trash

YES



1



2

- Reduce sediment build-up in storage tanks or reservoirs by minimizing runoff over exposed surfaces.
 - Utilize sediment traps to remove sediment from runoff.
 - Minimize wear and tear on pumping equipment by controlling sediment movement at its source.
 - Utilize recycled water for irrigating non-production landscaped areas.
 - Fertilizer rates should be altered taking into account the nutrient content of the collected water.
 - Line reservoirs with an impervious material, such as a professional pond liner.
 - Maintain reservoirs properly to prevent algae build-up and eliminate mosquito populations. Seek professional assistance prior to installation.
 - Fence in reservoirs and provide safety equipment to prevent accidental drownings.
- 1 Water storage tanks.
 - 2 This concrete water collection basin has been built wide enough to accommodate equipment to remove sediment.

NO



Reservoirs present potential drowning hazards. The reservoir in this picture is not fenced and lacks nearby safety equipment.



Water collection and storage are **not allowed** on SCE property due to structural engineering requirements.

Water Treatment

M

POTENTIAL POLLUTANTS: Nutrients • Pathogens • Pesticides • Sediment • Trash

YES

- Obtain professional assistance when designing, installing, or maintaining a water treatment system.

Types of treatment systems include:

- Heat
- Microfiltration
- Ultraviolet
- Ozone
- Chlorination

Biological treatment methods include:

- Slow sand filtration
- Vegetated filters

- Thoroughly understand the advantages and disadvantages of each type of treatment prior to selecting a system.

1 An ultraviolet (UV) treatment system.

2 An ozone treatment system.



1



2

NO

Water treatment effectiveness is reduced with some treatment methods due to the presence of high organic content and particulates. Pre-treatment may be necessary if runoff resembles the picture to the left.



Water treatment is **not allowed** on SCE property due to structural engineering requirements.

Water Quality Related References

Online Resources and Publications

California Department of Transportation Stormwater Manuals and Handbooks

<http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>

California Stormwater Quality Association Handbooks

<http://www.cabmphandbooks.com/>

Constructed Wetlands: A How to Guide for Nurseries

Clemson University Dept. of Environmental Horticulture, USDA Agricultural Research Service

http://www.clemson.edu/extension/horticulture/nursery/images/cws_howtoguide_small.pdf

Container Nursery Production and Business Management Manual

University of California Division of Agriculture and Natural Resources (Pub. 3540)

<http://anrcatalog.ucdavis.edu/Details.aspx?itemNo=3540>

County of Orange – OC Watersheds Documents

<http://ocwatersheds.com/documents/bmp/industrialcommercialbusinessesactivities>

UC Agriculture and Natural Resources - Agricultural Water Quality Research and Education Blog

<http://ucanr.edu/sites/agwaterquality/publications/>

UC Cooperative Extension - The Farm Water Quality Plan: Farm Water Planning Series (Pub. 8332)

<http://anrcatalog.ucdavis.edu/pdf/8332.pdf>

University of California, Riverside – PesticideWise

<http://www.pw.ucr.edu>

Water Education Alliance for Horticulture

<http://www.watereducationalliance.org>

Laws, Regulations, and Ordinances

County of Orange – OC Watersheds

<http://ocwatersheds.com/documents/damp>

County of Los Angeles – Department of Public Works

<http://ladpw.org/WMD/npdes/>

County of Riverside – Flood Control and Water Conservation District – Storm Water Program

<http://www.floodcontrol.co.riverside.ca.us/stormwater/>

County of San Diego – Project Clean Water

<http://www.projectcleanwater.org/html/programs.html>

County of San Diego – Land Use and Environment Group/Agriculture/Weights and Measures

http://www.sdcounty.ca.gov/awm/ag_water.html

County of Ventura – Stormwater Quality Management Program

<http://www.vcstormwater.org/regulations.html>

Regulations

Federal

Clean Water Act (National Pollutant Discharge Elimination System, Total Maximum Daily Load)
Coastal Zone Act Reauthorization Amendments of 1990

State

Porter-Cologne Water Quality Act
Nonpoint Source Program Plan – required under Clean Water Act
Irrigated Lands Regulatory Program

Regional

Agricultural Waivers
Basin Plan, WDRs
Total Maximum Daily Loads – required under Clean Water Act for polluted waters listed on California's 303(d) list.

Agencies Involved in Water Quality Issues

Federal

US Environmental Protection Agency (USEPA)
U.S. Fish and Wildlife Service (USFW)
Army Corps of Engineers (ACOE)
National Oceanic and Atmospheric Administration (NOAA)

State

State Water Resources Control Board (SWRCB)
California Department of Fish and Game (CDFG)
California Department of Pesticide Regulation (CDPR)
California Coastal Commission (CCC)

Regional

Regional Water Quality Control Board (RWQCB - 9 regions in state)

Local

County (various departments including stormwater and planning)
City (various departments including stormwater and planning)
Irrigated Lands Groups

* *Construction of structural BMPs to alter flow into or in natural waterways requires permitting from one or more agencies listed above.*

Glossary

Terms

Berm

A curb, ledge, wall or mound used to prevent the spread of contaminants.

Best Management Practice (BMP) or Management Practice (MP)

A practice or combination of practices that are the most effective and practicable (including technological, economical, and institutional considerations) means of controlling point or nonpoint source pollutants at levels compatible with environmental quality goals.

Binder

A binder is a material used to bind together two or more other materials in mixtures.

Geotextile

A woven fabric capable of passing water but able to hold back soil.

Integrated Pest Management (IPM)

The use of different techniques in combination to control pests, with an emphasis on methods that are least injurious to the environment and most specific to the particular pest.

Municipal Storm Water Permitting Program

NPDES program to regulate discharges from municipal separate storm sewer systems (MS4s).

Nutrients

Chemicals that are needed by plants and animals for growth (eg, nitrogen, phosphorus). In water resources, if other physical and chemical conditions are optimal, excessive amounts of nutrients can lead to degradation of water quality by promoting excessive growth, accumulation, and subsequent decay of plants, especially algae. Some nutrients can be toxic to animals at high concentrations.

Pathogens

A pathogen is a bacterium, virus, or parasite that causes or is capable of causing disease. Pathogens may contaminate water and cause waterborne disease.

Pervious

Pervious materials permit water to enter the ground by virtue of their porous nature or by large spaces in the material.

Pesticides

Chemical substances used to control pests. Pesticides often have unintended toxic effects on living organisms in soil and water.

Polyacrylamides (PAM)

Chemical soil stabilizer that when applied according to recommendations reduces the quantity of suspended sediments in surface water runoff by flocculation (gathering together small particles to form larger particles).

Sediments

Soil, sand, and minerals washed from land into water, usually after rain. They pile up in reservoirs, rivers and harbors, destroying fish and wildlife habitat, and clouding the water so that sunlight cannot reach aquatic plants.

Total Maximum Daily Load (TMDL)

A Total Maximum Daily Load describes the amount of a pollutant that a waterway can receive without violating water quality standards. The TMDL process provides a flexible assessment and planning framework for identifying load reductions or other actions needed to attain water quality standards (ie, water quality goals to protect aquatic life, drinking water, and other water uses).

Acronyms

BMP - Best Management Practices

CWA - Clean Water Act

MS4 - Municipal Separate Storm Sewer System

NPDES - National Pollutant Discharge Elimination System

PCPA - Pesticide Contamination Prevention Act

QAPP - Quality Assurance Project Plan

RWQCB - Regional Water Quality Control Boards

SWRCB - State Water Resources Control Board

TMDL - Total Maximum Daily Load

USEPA - United States Environmental Protection Agency

WDR - Waste Discharge Requirement

For a listing of agency acronyms see page 23

BMP Recordkeeping

A

Composting
Area

BMP NAME	INSTALLATION DATE	MAINTENANCE FREQUENCY

B

Fertilizer
Storage

BMP NAME	INSTALLATION DATE	MAINTENANCE FREQUENCY

C

Restroom &
Trash Facilities

BMP NAME	INSTALLATION DATE	MAINTENANCE FREQUENCY

D

Maintenance
Areas

BMP NAME	INSTALLATION DATE	MAINTENANCE FREQUENCY

E

Non-Production
Areas

BMP NAME	INSTALLATION DATE	MAINTENANCE FREQUENCY

F

Parking Lots &
Loading Docks

BMP NAME	INSTALLATION DATE	MAINTENANCE FREQUENCY

G
Pesticide
Storage

BMP NAME	INSTALLATION DATE	MAINTENANCE FREQUENCY

H
Potting Area

BMP NAME	INSTALLATION DATE	MAINTENANCE FREQUENCY

I
Production
Areas

BMP NAME	INSTALLATION DATE	MAINTENANCE FREQUENCY

J
Roads

BMP NAME	INSTALLATION DATE	MAINTENANCE FREQUENCY

K
Soil Storage &
Mixing Area

BMP NAME	INSTALLATION DATE	MAINTENANCE FREQUENCY

L
Water Collection
& Storage

BMP NAME	INSTALLATION DATE	MAINTENANCE FREQUENCY

M
Water
Treatment

BMP NAME	INSTALLATION DATE	MAINTENANCE FREQUENCY

SCE BMP Approval Guidelines



The following criteria are provided to aid in the submission of a BMP list for SCE consideration and approval prior to implementation by the licensee. Submission of a BMP list for approval should be done well in advance of the next wet weather season (October - March).

- ☐ Select BMPs from handbook (excluding any BMPs not allowed on SCE property).
- ☐ Submit 5 copies of existing SCE approved plot plan with proposed location(s) and dimensions of each BMP.
- ☐ Verify any clearance requirements from SCE facilities for proposed BMPs. Location of BMPs should not impede access to SCE towers, poles, or conductors.
- ☐ A template submission letter (opposite page) is provided for your convenience and should accompany your plot plan.
- ☐ Send complete package to your appropriate Southern California Edison Right of Way Agent.

Date

Southern California Edison
Corporate Real Estate
14799 Chestnut St.
Westminster, CA 92683

Subject: Request for Approval to Construct BMPs

Account No. _____

Property No. _____

Site Location _____

Attached for Southern California Edison's review and approval is a plot plan depicting the location of proposed BMPs that are being considered for the area which we currently license from Southern California Edison.

Please provide your written approval if you concur with these proposed improvements. We understand that we will not move forward without prior written approval from Southern California Edison. We can be reached at (_____) _____ - _____.

Sincerely,

Nursery Licensee

Best Management Practices - A Water Quality Field Guide for Nurseries aids nursery growers in identifying potential pollutants and selecting practices to reduce or eliminate their impact on water quality. The design of the field guide allows the grower to document the date a practice is initiated, its maintenance requirements, and whether the practice is successful.



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These guidelines have been developed by UCCE for:



SOUTHERN CALIFORNIA
EDISON

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The original version of this field guide was developed in collaboration with Southern California Edison, Orange County Coastkeeper, and Orange County Farm Bureau.